9000

ADVANCED GUITAR EFFECTS PROCESSOR

ZOOM

High-Tech Tools for Artistic Expression

OPERATION MANUAL

TABLE OF CONTENTS

Congratulations and thank you for purchasing the **ZOOM 9000 Advanced Guitar Effects Processor** (hereafter called "9000").

The 9000 is a sophisticated multi-effect device with the following features and functions:

● A total of 21 basic individual effects, which are built into the 9000. Up to five these effects can be combined and programmed. Up to 20 programs can be stored in memory.

● With carefully selected effects, which can be set by the user, the 9000 can be operated in the same manner as for a compact effector.

● Compressor and distortion effects are generated using analog circuitry so that the rich, natural sustain and distortion effects are obtained.

● A built-in automatic tuning function. Tuning is possible while musical instruments are connected.

● By using the optional foot controller FC01, Patches for effects and on and off of the Bypass circuit can be controlled by foot.

Please take the time to read this manual carefully, in order to get the most out of your 9000 and ensure long-time use and reliability.

WARNING!
Danger of explosion at incorrect battery change.
Use same type of battery or of equivalent type recommended by manufacturer.
Always discard the battery acording to the manufacturer's instructions.

Safety Precautions

Keep in mind the following safety tips and precautions for optimum safe use of the 9000.

Power Requirements

A special AC adapter is designed for use only with the 9000. Make sure to use six AA size batteries or the AC adapter AD0001 (optional). Use of another AC adapter can cause malfunctions or damage.

Make sure to consult with your local ZOOM dealer about the use of a proper AC adapter or voltage converter when using the AC adapter in an area (for example, another country) where the power supply voltage is different.

Environment

Avoid using your 9000 in environments where it will be exposed to:

● Temperature extremes
● High humidity or moisture
● Excessive dust or sand
● Excessive vibration or sudden shock

Handling

Since the 9000 is a precision electronic device, avoid applying excessive force to the switches and buttons. Though the 9000 has been constructed for sturdiness and reliability, dropping, smashing, or applying too much weight to the product can cause damage.

Remodeling

Never open the case of the 9000 nor attempt to modify the product in any way since this can result in damage.

Connecting Cables and Input and Output Jacks

You should always turn off the power before connecting any cables. Also make sure to disconnect all cables and the AC adapter before moving the 9000.

Notes on Internal Battery for Memory Back Up
Caution!

The 9000 contains a long-life lithium battery (this battery is different from the batteries of power supply) which maintains the effect programs stored in the internal memory intact even when the unit is turned off. With normal use, the battery should last for approximately 3 years. When the battery has run down , " ERROR " will be displayed and the contents of the memory will be set automatically back to the factory- set status. When the battery is replaced, the program in the memory will be lost. Before replacing the battery, record the program data, and then restore the program data after the battery has been replaced. To avoid possible data loss, contact your local ZOOM dealer and have the battery replaced by a qualified technician. Do not attempt to replace the battery by yourself, since installing an improper battery could result in an explosion.

Precautions

Electrical Interference

The 9000 uses digital circuitry that may cause interference and noise if placed too close to other electrical equipment, such as TV sets and radio receivers. If such problems occur, move the 9000 further away from the affected equipment. Also, when fluorescent lights or devices with built-in motors are in close proximity to the 9000, the 9000 may not function properly.

Cleaning

Use a soft, dry cloth to clean the 9000. If necessary, a slightly damp cloth can also be used. Do not use any abrasive cleansers, waxes, or solvents (such as paint thinner or alcohol), since these may dull the finish or damage the surface.

About Troubles

If any difficulty arises during operation, or the 9000 malfunctions, unplug the 9000 and disconnect the cables connected to the IN/POWER connector, and then also disconnect the other cables from the 9000. Contact the shop from which you have purchased the 9000 with the following information: model name; serial number; symptom; your name, address and phone number.

Keep this manual in a safe, convenient place for future reference.

This manual has been written using easy terms so that it can be understood with ease by the first time users. However, the 9000 has several special functions which are not available with a conventional single compact fader. This section, therefore, explains some of the terms used throughout the manual to describe the special functions of the 9000.

Effect Module

The 9000 consists of basic Effect groups, which are listed below. Each group is referred to as an "Effect Module." The following are the types of Effect Modules:

● COMP+DIST (Compressor+distortion Effect Module group)
● EQ (Equalizer Effect Module group)
● MOD (Modulation Effect Module group such as Chorus and flanger)
● DLY (Delay Effect Module group)
● REV (Reverb Effect Module group)

Effect Type

Each Effect Module consists of several types of effects (however, only one type of delay effect is available) which are called Effect Types in this manual. Each Effect Module can use one Effect Type at a time. See the table on page 19 for the Effect Types in each Effect Module.

Patch

The 9000 allows you to use a maximum of five Effect Modules simultaneously. A group of Effect Modules, each of which has individual audio level setting in addition to their own Effect Type settings, is referred to as a Patch. The 9000 can store up to 20 Patches in the internally memory.
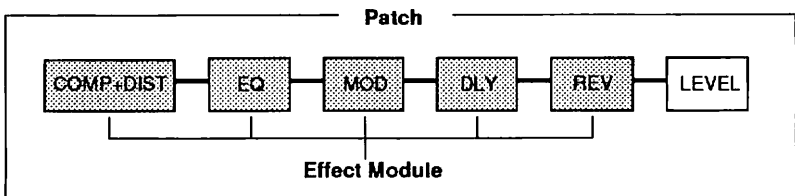
Bank

The 9000 calls the desired Patch from a group of four Patches. Each group is referred to as a Bank. Use Bank numbers 0 to 4, and Patch numbers 1 to 4 to select the desired Patch from the desired Bank.

Parameter

The elements which determine the sound of an effect are referred to as parameters. Parameter values can be set for each Effect Module for making desired Patches with the 9000.
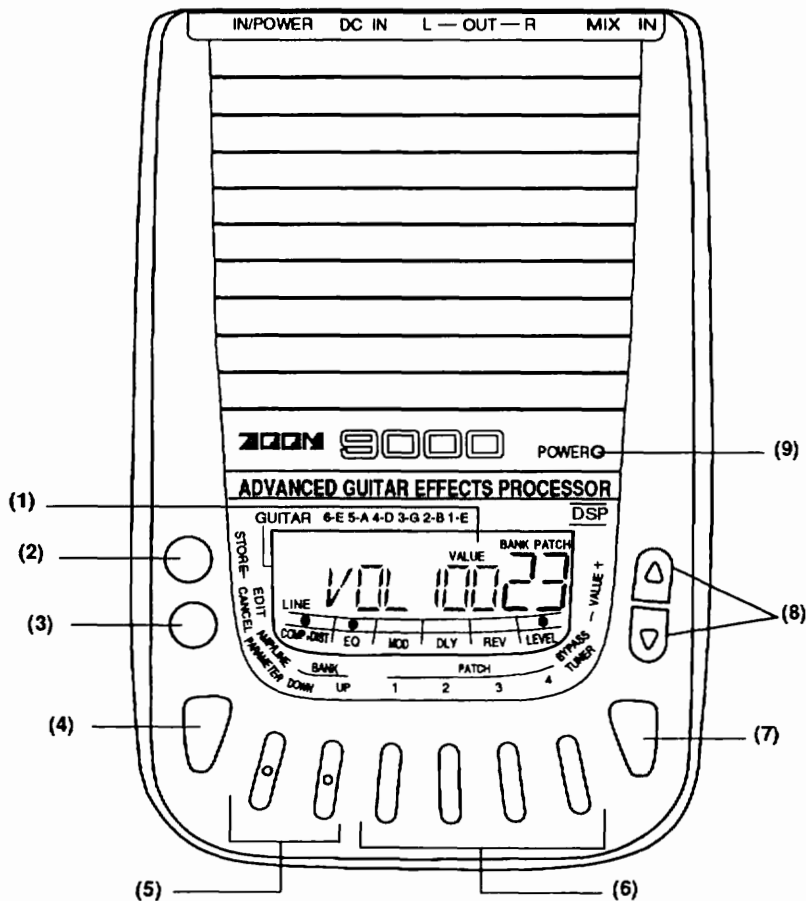
Mode

The functions of the 9000 can be roughly divided into two different group of functions. These groups are referred to as "modes" and are described below.

● **Play mode** — In this mode, Patches can be selected and played. When the power is turned on, the 9000 is automatically set in this mode.

● **Edit mode** — In this mode, the parameters of each Patch can be edited.

Front Panel

(1) Display
This display shows the information necessary for operating the 9000, such as Banks, Patch numbers, effect parameter values and other messages.

(2)STORE key
This key allows you to store the edited Patch in memory.

(3) EDIT/CANCEL key

This key allows you to put the 9000 in the Edit mode. Pressing this key allows you also to cancel the store and some other operations.

(4) AMP/LINE (PARAMETER) key

● In the Play mode, this key allows you to select tone of the 9000 in accordance with the playback unit used.

● In the Edit mode, this key allows you to call the parameter to be edited.

(5) BANK DOWN/UP key

This key allows you to select the desired Bank from Banks 0 to 4. The desired Patch can be selected by using this key and the PATCH key.

(6) PATCH 1 to 4 key

This key allows you to select the desired Patch from the Bank currently being selected.

(7)BYPASS/TUNER key

This key allows you to turn off (or bypass) the effect temporarily. This key activates the tuning function when the 9000 is put in the Bypass status.

(8)VALUE - / + key

● In the Play mode, normally, this key allows you to control the master volume. In a Bypass status, this key is used for adjusting the calibration signal to be used as the reference pitch of the tuner.

● In the Edit mode, this key allows you to select the effect type and change the parameter value currently being selected.

(9)POWER LED

This indicator shows the power-on or power-off status.

Note:

The flashing POWER LED indicates that the batteries are about to run down. When the POWER LED flashes, replace the batteries. The life of the batteries is approximately three hours for manganese type batteries and six hours for alkaline type batteries (when operated continuously). To install the lid of the battery case, insert the hook of the lid into the hole, and then firmly lock the back of the lid in place of the unit.

Rear Panel
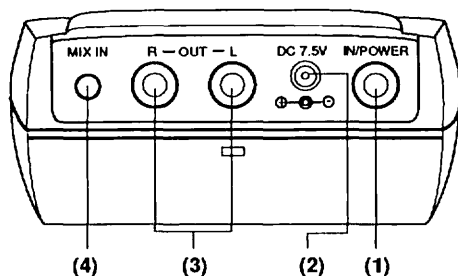
(1) IN/POWER(input/power) connector

For connection of a guitar. When the cable with a mono plug is connected to this connector, the 9000 turns on automatically. Note that power is not turned on when a stereo plug is used.

(2) DC-7.5V (AC adapter) jack

For connection of the optional AC adapter (AD-0001) when supplying power from the AC adapter.

(3) OUT L/R connector

For connection to a guitar amplifier, a PA system, or a recording mixer.

(4) MIX IN jack

For connection to the phones connector of a CD player or a cassette tape player, using a stereo-mini plug. The sound input to this jack can be mixed with the sound of musical instruments. An effect is not available for the sound applied to this jack.

Right Panel
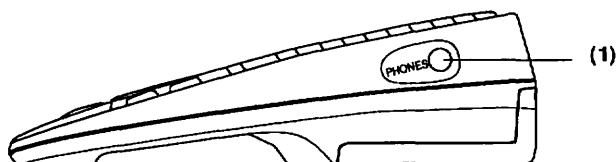
(1) PHONES jack

For connection to a stereo headphones set.

* The remote jack for the FC01 is located on the bottom.

Connection Examples

Connection with only one guitar amplifier (Connection Example 1)

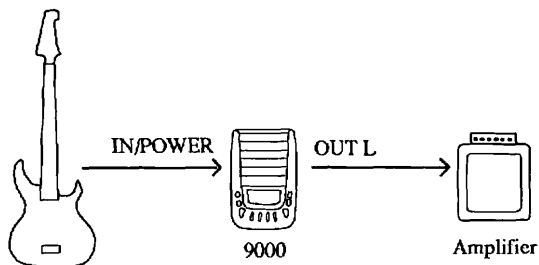To use the 9000 with one guitar amplifier, connect the output from the musical instrument to the IN/POWER connector of the 9000, and the OUT L connector of the 9000 to the amplifier. With this connection, stereo effects such as reverb, stereo chorus, etc. are output as monaural.

Connection Example 1

IN/POWER → OUT L → Amplifier

9000

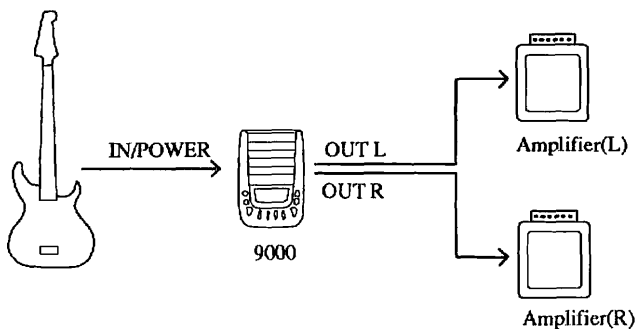## Connection with two guitar amplifiers (Connection Example 2)

To use the 9000 with two guitar amplifiers, connect the OUT L/R connectors of the 9000 to the amplifiers. A well balanced stereo sound can be obtained when the stereo effects are activated.
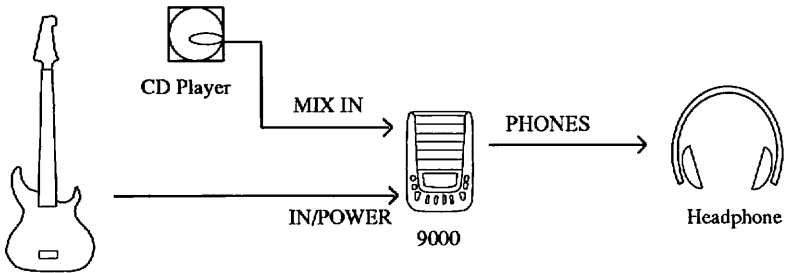
Connection Example 2

IN/POWER → OUT L → Amplifier(L)

OUT R

9000

Amplifier(R)

Connection with a CD player or a cassette tape player (Connection Example 3)

By connecting the phones output from the CD player or the cassette tape player to the MIX IN jack of the 9000, a mixed sound of the source sound of the CD or the tape, and the sound of the musical instrument can be output. This mixed sound through the headphones can be used when you use the musical instrument in the night or can be used for the purpose of record copying.

Connection Example 3

Connection with a tape recorder or a mixer (Connection Example 4)

The 9000 can be connected directly to an MTR (multi-track recorder) or a mixer. When making connections to a high-fidelity audio amplifier system, turn on the amplifier simulation function described on page 12.

Caution:

When the cable is connected to the IN/POWER connector of the 9000, the 9000 turns on automatically. When using the 9000 with batteries, be sure to disconnect the cable from the IN connector whenever the 9000 is not in use, in order to extend the life of the batteries.

Connection Example 4
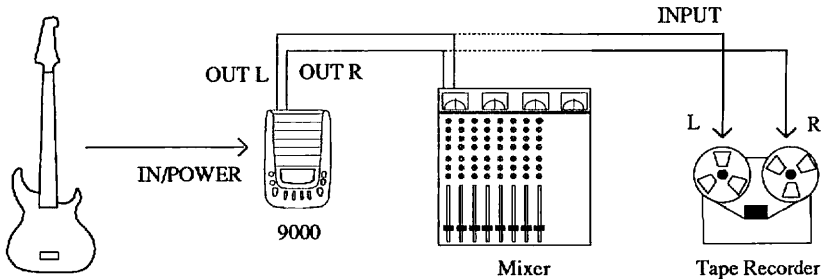
Play Mode

In the Play mode, a Patch is selected and played. When the 9000 is turned on, it goes into the Play mode automatically. In the Play mode, the following information is available on the display.

Displayed Items in the Play Mode

(1) On and off of the amplifier simulator

displays that the playback characteristics of the 9000 is set to "LINE" or "AMP" (guitar amplifier).

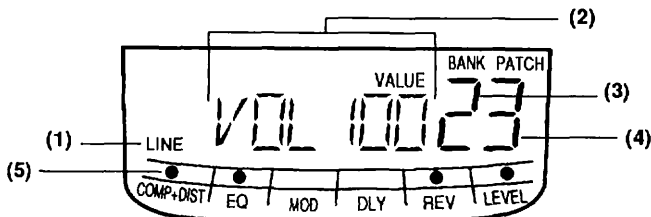### (2) Master volume control

controls the volume from the 9000. This is effective on all the Patches.

(3) Bank number

shows the Bank number which is currently being selected.

(4)Patch number

shows the Patch number which is currently being selected.

(5)Effect mark

shows the Effect Module that the selected Patch uses, with a "●" mark.

Note:

The contents displayed differ depending on the last status when the 9000 was turned off.

Selecting a Patch

· **Connect the 9000 to the musical instrument and the amplifier, and then turn on the amplifier.**

The 9000 is turned on automatically when the cable is connected to the IN/POWER connector of the 9000.

· Select a Bank with the BANK DOWN/UP key.

There are four groups of Patches with the 9000. Each group is called a Bank. Press the BANK DOWN/UP key from 0 to 4 to select the desired Bank. In this case, the corresponding Bank number will flash.

Note:

Only pressing the BANK DOWN/UP key does not change the sound of the effect. You can activate the Patch and change the sound by pressing the PATCH 1 to 4 key as described in the following step.
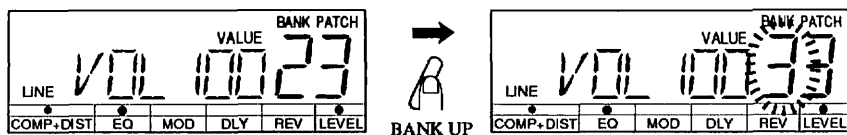
Selecting the Bank Number

· Select a Patch with the PATCH 1 to 4 key.

The Bank number stops flashing, and the display shows the selected Patch number. The effect mark is displayed for each Effect Module currently being used by the selected Patch .
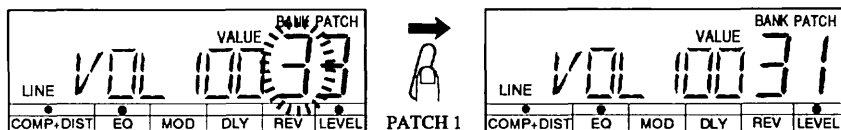
Selecting the Patch Number

Turning On and Off of the Amplifier Simulator

The 9000 is equipped with the amplifier simulator function for obtaining bright sound when played back with a high-fidelity audio amplifier system.

· In the Play mode, press the AMP/LINE key.

Every time you press the AMP/LINE key, "LINE" and "AMP" on the display switches by turn. When using the 9000 with the high-fidelity audio amplifier system, select "LINE" (the

amplifier simulator is turned on) to record directly with a tape recorder, or select "AMP" (the amplifier simulator is turned off) to play back with a guitar amplifier.

Switching of the Amplifier Simulator

Adjusting the Master Volume Control

· In the Play mode, hold down the VALUE - / + key.

The master volume value shown on the display changes. The value you have changed remains unchanged even when the 9000 is turned off.
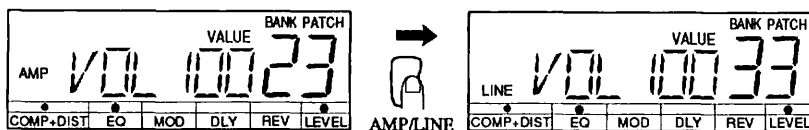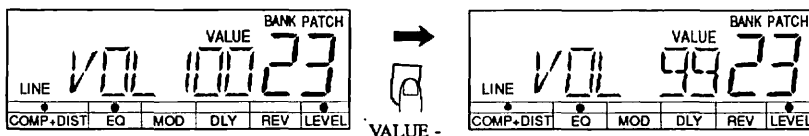

Changing the Master Volume Control

Note:

The master volume control is effective on all the Patches. This control is different from the level control (individual volume control for each Patch) explained for the operations in the Edit mode.

Bypassing the Effects

The 9000 can bypass all the effects (turned off temporarily) in a Patch. This function is convenient when you want to check a change of the sound made by the effect. In the Bypass status, the built-in automatic tuning function can be used.

· In the Play mode, press the BYPASS/TUNER key.

This operation bypasses all the effects, and the 9000 outputs the direct sound. The display changes as follows. "BYPASS TUNER" on the display indicates that the 9000 is in the Bypass status.

Displayed Items In the Bypass Status

13
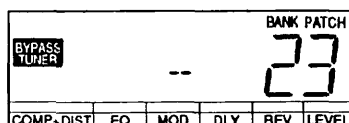
Tuning the Musical Instruments

The 9000 is equipped with an automatic guitar tuning function. This function can be used only when the 9000 is put in the Bypass status.

· In the Play mode, press the BYPASS/TUNER key.

The 9000 goes into the Bypass status, and the tuning function is activated.
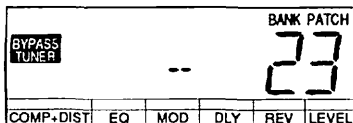
Displayed Items in the Bypass Status

· Pick strongly the released string in which you want to tune.

For example, if the pitch of the first string is higher than that of the reference, the display is as follows. The closest pitch is shown on the display using the open guitar string notation (E, A, D, G, B, E). The display also shows high and low of the pitch with the effect mark (●).
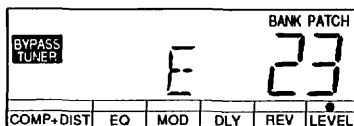
As you lower the pitch of the first string, the effect mark moves towards the center. When the effect mark has passed by "DLY", a guide mark (◁) appears. This mark indicates that the pitch is slightly high to the reference .
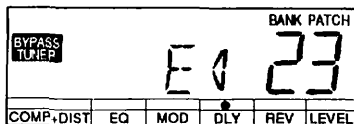
If you lower the pitch a little further, the effect mark disappears, and the guide mark appears at both sides , indicating that the precise tuning has been accomplished.
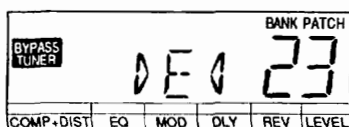
Note:

This tuning function is designed exclusively for the use with a guitar. If you want to tune a bass, apply harmonics.

Calibrating the Tuner

The calibration function adjusts finely the reference pitch for tuning. The 9000 sets pitch A4 to either 440 Hz, 441 Hz, or 442 Hz.

· In the Play mode, press the BYPASS/TUNER key.

The 9000 goes into the Bypass status, and the tuning function is activated.
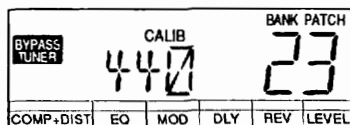
Displayed Items During Calibration

· Hold down either of the VALUE - / + key.

The display shows pitch A4 (in frequency) which is currently being selected, for about three seconds.

· Press the VALUE - / + key while the display shows the pitch.

This operation switches the displayed value from 440Hz to 441Hz to 442Hz in that order.

The 9000 goes into the Bypass status again in about three seconds after you have selected the desired pitch with the VALUE -/ + key, and the changed pitch is stored in memory as the reference.

Storing the Desired Patch in a Different Bank

The desired Bank number must be specified when selecting the desired Patch on the 9000. Setting the required Patches, which are to be used in a piece of music, in the same Bank makes the operation easy. This section explains how to set a Patch from one Bank to another, and how to store the Patch with the different Patch number.

· In the Play mode, select the desired Patch to be stored in the different Bank.

· Press the STORE key.
This operation puts the 9000 in a Standby status for store operation, and the Bank number and the Patch number start flashing.

STORE

CANCEL
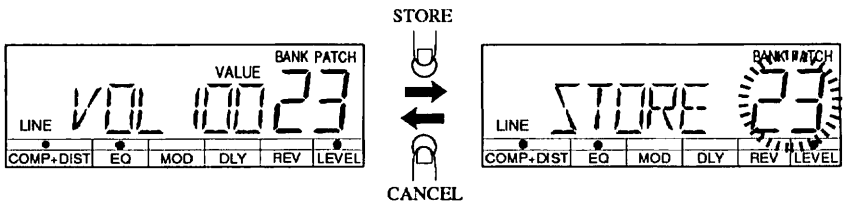
Displayed Items in a Standby Status for Store Operation

· Using the BANK DOWN/UP key and the PATCH 1 to 4 key, specify the Bank number and then the Patch number with which the Patch is to be stored.

Note:
When store operation of new data is carried out, the data currently being stored in the Bank will be deleted first. Be sure that the Patch currently being stored is not necessary. See page 22 to restore the factory-set Patches if you miserased the Patches.

· Press the STORE key again. This operation stores the Patch in the Bank.

Helpful Hint:
Pressing the EDIT/CANCEL key before pressing the STORE key for the second time stops store operation, and the 9000 goes into the Play mode.

Edit Mode

In the Edit mode, an Effect Module which comprises the Patches of the 9000 is called one after another, and the desired parameters for each Patch can be set.

Entering the Edit Mode

· In the Play mode, select the Patch to be edited, and then press the EDIT/CANCEL key.

The 9000 goes into the Edit mode, and the display shows "EDIT." Pressing the EDIT/CANCEL key again sets the 9000 back in the Play mode.
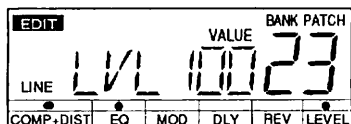
Displayed Items in the Edit Mode

Editing Patches

Edit the Patch in the following simple steps:

1. select the Effect Module. (with the **BANK DOWN/UP** key and the **/PATCH 1 to 4** key)
2. select the Effect Type. (with the **VALUE - / +** key)
3. select the parameter. (with the **PARAMETER** key)
4. change the value of the selected parameter. (with the **VALUE - / +** key)

· In the Edit mode, using the BANK DOWN/UP key and the PATCH 1 to 4 key, select the Effect Module to be edited.

The 9000 has the following groups of Effect Modules for the Patches.

● **COMP+DIST** (Compressor/distortion Effect Module group)
● **EQ** (Equalizer Effect Module group)
● **MOD** (Modulation Effect Module group such as chorus and flanger)
● **DLY** (Delay Effect Module group)
● **REV** (Reverb Effect Module group)

The above Effect Modules are connected in series . The Patches of the 9000 are controlled by these Effect Modules and the LEVEL parameter (volume control which is independent among the Patches).

IN/POWER → COMP+DIST → EQ → MOD → DLY → REV → OUT L
                                                    → OUT R
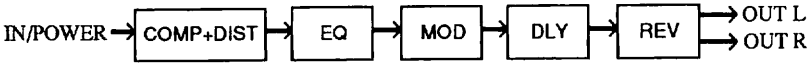
Composition of the Effect Modules

In the Edit mode, the BANK DOWN/UP key and the PATCH 1 to 4 key are assigned to the five Effect Modules and to the LEVEL parameter. To edit the desired Patch, select the Effect Module or the LEVEL parameter to be edited, using these keys.
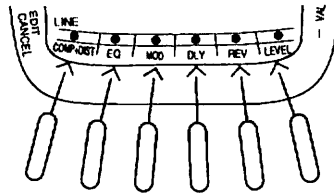
Key Arrangement for Selecting the Effect Module

● Selecting the Effect Module which is off — shows "OFF" on the display.

●Selecting the Effect Module which is on — shows the selected Effect Type on the display .
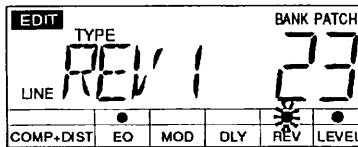
Displayed Items of the Effect Type

· **Select the Effect Type with the VALUE - / + key.**
Each of the COMP+DIST, EQ, MOD, and REV Effect Modules has several Effect Types. The following chart shows the Effect Types of each Effect Module.

MODULE	EFFECT TYPE	MODULE	EFFECT TYPE
COMP+DIST	CLEAN	MOD	CHORS1
	RHYTHM		CHORS2
	CRUNCH		TREMOL
	OVDRV		STEP
	DIST		CRY
EQ	EQ		METAL
	ENHANC	DLY	DLY1
MOD	PITCH	REV	REV1
	PHASE		REV2
	MID EQ		DLY2
	FLANGE		

Effect Types of each Effect Module

For example, while the REV Effect Module is selected from REV1, pressing the VALUE - /
+ key changes the Effect Type as shown in the following figure.
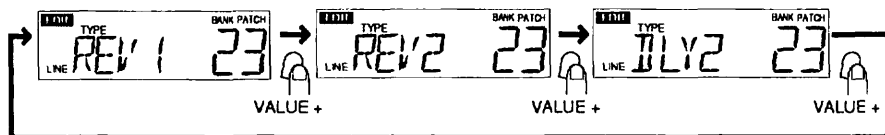
Example of a Change of the Type of Effects

· Press the PARAMETER(AMP/LINE) key, and select the parameter to be changed.

Each Effect Type uses the parameter independent from another Effect Type (the function of
the parameter can be considered as the effect controls on a compact effector). Pressing the
PARAMETER key displays the parameters for the selected effect in order.

Helpful Hint:

When wishing to return to the effect type selection after pressing the PARAMETER
(AMP/LINE) key, use the BANK DOWN/UP key and the PATCH 1-4 keys to select the same
effect module and then repeat the above steps.

The following figure shows an example when the parameters for Effect Type REV2 is changed.
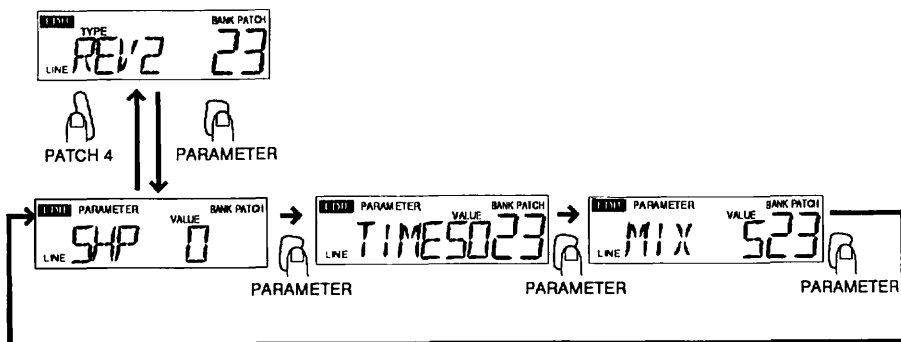
Example of a Parameter Change

· **Hold down the VALUE - / + key.**

The value of the parameter selected changes .
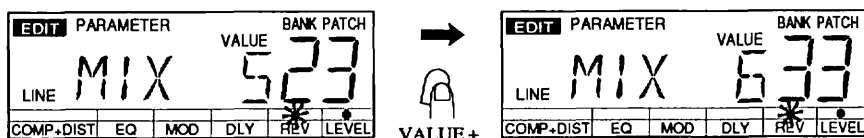
Changing the Value of the Parameter

In the same way, press the PARAMETER (AMP/LINE) key to select another parameter, and set the value with the VALUE -/+ key.

Helpful Hint:

When wishing to edit another effect module, use the BANK DOWN /UP key and the PATE 1-4 keys to select the effect module, and then repeat the above steps.

Turning On and Off the Effect Module

Each effect can be turned on and off independently from others.

· In the Edit mode, using the BANK DOWN/UP key and the PATCH 1 to 4 key, select the desired Effect Module.

·· Press the same key again.

This operation changes the on/off status of the selected Effect Module. The display shows "OFF" when the Effect Module is turned off.

Using the Comparison Function

Pressing the BYPASS/TUNER key while editing the Patch sets temporarily the 9000 in the previous status (that of the last edit). This function is called "Comparison."

The display changes as follows, and the parameter of the Patch to be edited now is set back to the parameter before editing.
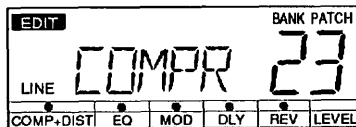
Displayed Items for Comparison

To set the 9000 back in the Edit mode, press the BYPASS/TUNER key again.

Helpful Hint:

Using the Comparison function, a change of the overall effect when a parameter has been changed can be checked with ease.

Storing the Edited Patch

The edited parameter in the Edit mode will be deleted when another Patch is selected if it has not been stored in memory. Store the Patch you prefer when you have created that Patch.

· **When setting of each parameter has been completed in the Edit mode, press the STORE key.**
This operation puts the 9000 in the store Standby status, and the Bank number and the Patch number start flashing.

· **Using the BANK DOWN/UP key and the PATCH 1 to 4 key, specify the Bank number in which the Patch is to be stored and the Patch number.**
If the Bank number is not specified, the edited Patch will be stored in the Bank currently being selected.

· **Press the STORE key. This operation stores the Patch in memory, and the 9000 goes back in the Play mode. If you press the EDIT/CANCEL key before pressing the STORE key, the 9000 stops the store operation and goes into the Play mode.**

Helpful Hint:
Even when the 9000 goes back into the Play mode, the edited Patch remains unchanged until you have called another Patch.

Factory-set Patches

The 9000 has the original Patch data which is the same as the factory-set Patch data, in the ROM (Read Only Memory) of the 9000. If you have accidentally deleted or changed the factory-set Patches, the factory-set Patch data can be retrieved and stored from the ROM.

· **In the Play mode, press the AMP/LINE for one second or more key while holding down the EDIT/CANCEL key.**
The displayed contents change as shown in the following figure. This indicates that the preset Patches are ready to be retrieved.
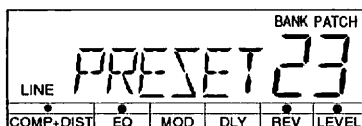
Displayed Items in Preset Recall Standby Status

· **Select the Patch you want retrieve, using the BANK DOWN/UP key and the PATCH 1 to 4 key. In this case, the sound of the effect can be monitored.**

● **To store the Patch in memory** — press the STORE key. This operation puts the 9000 in the Standby status. Then, select the Bank number with which the Patch is to be stored and the Patch number. Press the STORE key again (if you want to stop the operation, use the EDIT/CANCEL key).

● **To edit the Patch** — press the CANCEL key. The 9000 goes into the Play mode with the Patch unchanged. Then, put the 9000 in the Edit mode, using the EDIT/CANCEL key.

Patch Setting to the factory-set Status (Initialize)

Initialization is a special function which sets the Patches and other settings of the 9000 in the factory-set status. Note that when you carry out the initializing function, all the Patches stored in memory will be deleted.

· **In the Play mode, hold down the STORE key for about one second or more while holding down the EDIT/CANCEL key.**
The contents of the display changes as shown in the following figure.
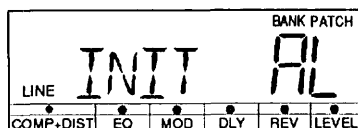
Displayed Items in the Initializing Standby Status

● **To initialize all the Patches** — press the STORE key. "AL" on the display starts flashing. Then, press the STORE key again. (This operation can be canceled by pressing the EDIT/CANCEL key).

● **To stop the initializing operation in a half way** — press EDIT/CANCEL key. This operation puts the 9000 back in the Play mode.

Helpful Hint:
When the initializing function is carried out, calibration settings of the master volume and the tuning will be set also back in the factory-set status.

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This section explains the parameters of all the effects available on the 9000. However, the explanation does not overlap for the use of the parameters which is common to another Effect Type.

■ Effect Module 1 : Compressor+distortion (COMP+DIST)

This Effect Module uses a compressor and distortion effects. The compressor is an effect which maintains the volume at a certain level without loosing a sense of tone and attack. The distortion is an effect which gives a unique tube-amplifier-like distortion and long sustain to the sound.

With this Effect Module, five degrees of the depth of the distortion for each Effect Type are available. Compression can be adjusted by changing the parameter value.

● CLEAN
This Effect Type uses only the compressor. A clean sound without distortion is obtained. The use of this Effect Type with chorus is suitable for arpeggios.

[Parameter]
(1)COMP (Compressor): 0 to 2
This parameter determines the depth of the compression. The higher the value is, the smaller the difference of the level is made, and the longer sustain is obtained.

● RHYTHM
This Effect Type gives distortion which is similar to that of a slightly distorted tube-amplifier, to the sound. It is suitable for chord cutting.

[Parameter]
(1)COMP (Compressor): 0 to 2

● CRUNCH
This Effect Type gives natural and warm distortion which is unique to the tube-amplifier, to the sound.

[Parameter]
(1)COMP (Compressor): 0 to 2

● OVDRV (Overdrive)
This Effect Type is an overdrive effect sound which fits most of sound creation.

[Parameter]
1)COMP (Compressor): 0 to 2

● DIST (Distortion)

This Effect Type gives the same hard distortion as that when a large amplifier is driven fully with sounds at high level.

[Parameter]
1)COMP (Compressor): 0 to 2

■ Effect Module 2: Equalizer (EQ)

This Effect Module includes two Effect Types to control the tone of sounds.

● EQ (Equalizer)

This Effect Type is a tone-control-type equalizer which boosts or cuts high frequencies and low frequencies independently.

[Parameter]
1)LO (Low): -7 to +7
This parameter adjusts the sound of low frequencies.
2)HI (High): -7 to +7
This parameter adjusts the sound of high frequencies.

●ENHANC (Enhancer)

This Effect Type boosts high frequencies to make the sound clear.

[Parameter]
1)DEPT (Depth): 0 to 10
This parameter determines the amount of sound to be pronounced. The higher the value is, the deeper the effect is obtained.
2)FREQ (Frequency): 0 to 10
This parameter determines the frequency to be boosted. The higher the value is, the more emphasis on the high frequencies is obtained.

Helpful Hint:
Giving too much distortion increases the frequency components in mid-range, and this may loose clearness of the sound. In this case, use the enhancer to obtain a clear distortion sound.

■ Effect Module 3: Modulation (MOD)

This Effect Module has 11 Effect Types which change tone in time.

● PITCH (pitch)
This Effect Type adds the effect sound with shifted pitch within a range of upper and lower one octave, to the direct sound.

[Parameter]
(1)PIT (Pitch): -12 to +12
This parameter determines the difference of pitch at a chromatic interval. The range which is settable is up and down to one octave.
(2) FIN (Fine): -10 to +10
This parameter adjusts finely the change of pitch.
(3) BAL (Balance): 0 to 10
This parameter determines the volume balance between the effect sound and the direct sound. Setting to 0 outputs only the direct sound while setting to 10 outputs only the effect sound.

Helpful Hint:
Setting the pitch (PIT) to 0 and increasing slightly the fine (FIN) gives the chorus effect with less modulation, to the sound.

● PHASE
This Effect Type adds the effect sound of different phase to the direct sound, and changes that phase difference in time. An warm, straight tone which is different from flanger or chorus can be obtained.

[Parameter]
(1)DEPT (Depth): 0 to 10
This parameter determines the depth of the phasing effect.
(2) RATE: 0 to 50
This parameter determines the waving speed of the phase.

● MID_EQ (Mid-range equalizer)
This Effect Type is a unique effect which uses phasing effect as an equalizer. This adds the effect sound of a different phase to the direct sound, and creates peaks and dips in the frequency response. As a result, the sound in particular frequency ranges is pronounced.

[Parameter]
(1)DEPT (Depth): 0 to 10

This parameter determines the amount of boost for the frequency to be set with the following FREQP parameter.

(2) FREQ (Frequency): 0 to 50

This parameter determines the center frequency to be boosted.

(3) PEAK (Peak): 0 to 10

This parameter determines the range of the sound to be boosted. The higher the value is, the narrower the range is set.

●FLANGE (Flanger)

This Effect Type adds an effect sound which is delayed by some 10 ms to the direct sound, and changes the delay time periodically. This effect obtains an intense sound. When combined with distortion, a swirling flanger sound called "jet sound" is obtained.

[Parameter]
(1)DEPT (Depth): 0 to 10

This parameter determines the depth of the flanger effect.

(2) RATE: 0 to 50

This parameter determines the speed of modulation to the flanger effect.

(3) PEAK (Peak): 0 to 10

This parameter determines the amount of feedback from the effect output to the input. Increasing this value pronounces the modulation effect more and gives a more intense effect to the sound.

●CHORS1 (Chorus 1)

This Effect Type adds the effect sound whose pitch is modulated periodically, to the direct sound. This gives a mono chorus effect which has spatially wide feeling, to the sound. The principle of this effect is similar to flanger. However, this effect does not have parameters for feedback.

[Parameter]
(1)DEPT (Depth): 0 to 10

This parameter determines the depth of the tone change.

(2)RATE: 0 to 50

This parameter determines the speed of the tone change.

(3) MIX (Effect mix): 0 to 10

This parameter determines the mix amount of the effect sound with the direct sound. Setting to 0 outputs only the direct sound while setting to 10 outputs a maximum of the effect sound.

Helpful Hint:

To obtain a comfortable vibration, adjust the depth according to the change of the rate.

● CHORS2 (Chorus 2)

This Effect Type gives a stereo chorus effect to the sound. A maximum effect is obtained when played back with a stereo amplifier system.

[Parameter]

The parameters are the same as those for the Effect Type CHORS1 above.

● TREMOL (Tremolo)

This Effect Type changes the volume of sound periodically. This gives a tremolo effect in a range from conventional effect to strong clipping effect, to the sound.

[Parameter]

(1)DEPT (Depth): 0 to 10

This parameter determines the depth of the tremolo effect.

(2) RATE: 0 to 50

This parameter determines the speed of the tremolo effect.

(3) EDG (Edge): 0 to 10

This parameter deforms the tremolo waveform to a trapezoid waveform, which gives a strong effect up to clipping, by increasing the parameter value.
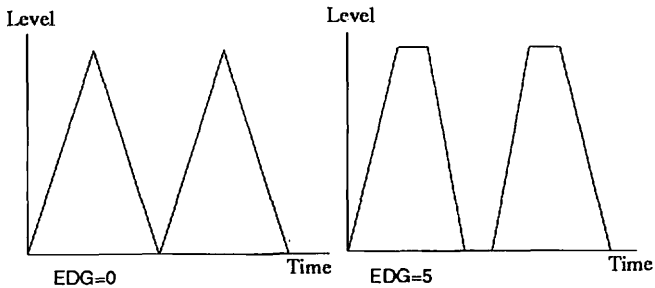
Effect of the EDG Parameter

● STEP

This Effect Type adds an effect in which the tone changes at random, to the direct sound. This creates an auto-arpeggio-like effect.

[Parameter]

(1)DEPT (Depth): 0 to 10

This parameter determines the depth of the tone change.

(2) RATE (Rate): 0 to 50

This parameter determines the speed of the tone change (rate of arpeggio).

(3) SPD (Speed): 0, 1

This parameter speeds up the effect six times for a special effect, by setting the parameter value to 1.

Helpful Hint:

This effect is similar to that obtainable with the sample & hold function of a synthesizer. Setting the speed to 1 gives an SFX-like-effect to the sound.

● CRY

This Effect Type is a unique auto wah effect in which every tone of the sound changes according to the strength of picking. This can also give a talking-wah-type effect to the sound.

[Parameter]

(1)SENS (Sense): 0 to 10

This parameter determines the sensitivity of the wah effect to the input signal. The higher this parameter value is, the deeper the wah effect is obtained even with a weak picking.

(2) DIR (Direction): 0, 1

This parameter determines the direction of the tone change. Selecting 0 (up) moves the peak of the sound towards higher frequencies while selecting 1 (down) moves it towards lower frequencies. When set to 0 (up), an effect of talking modulation is obtained.

Helpful Hint:

The effect of auto wah depends highly on the Effect Type of distortion. Please try several combinations with a variety of the Effect Type of distortion.

● METAL (Metallic)

This Effect Type creates a metallic sound by introducing an irregular series of harmonics, made by applying Amplitude Modulation (ring modulation) of an oscillator to the direct sound. In addition to this, the oscillator can be Frequency Modulated (this produces vibrato) with the LFO (Low Frequency Oscillator) in order to change slowly the metallic sound.

[Parameter]

(1)DEPT (Depth): 0 to 10

This parameter determines the depth of the modulation to the oscillator. Increasing the value of this parameter gives a slow change to the metallic sound.

(2) FREQ (Frequency): 0 to 50

This parameter determines the reference oscillation frequency of the modulator. Changing the value of this parameter gives a change to the metallic sound.

Helpful Hint:

To obtain a clear metallic sound, set COMP+DIST to CLEAN (the Effect Type with the distortion set to off), and play back with a pure tone.

■ Effect Module 4: Delay (DLY)

This Effect Module adds an echo sound to the direct sound. Only one Effect Type is available.

● DLY1 (Delay 1)

This Effect Type is an conventional digital delay in which the delay time can be set up to 480 ms.

[Parameter]

(1)DECY: 0 to 10

This parameter determines the number of repetitions of the delay sound. The higher the value is, the more the repetition time is obtained.

(2) TIME: 1 to 48

This parameter determines the delay time (intervals between the delay sounds). To obtain the actual delay time (in ms unit), multiply the parameter value by 10.

(3) MIX (Mix level): 0 to 10

This parameter determines the mix amount of the effect sound with the direct sound. Setting this value to 0 outputs only the direct sound while setting this value to 10 gives a maximum of the effect sounds (delay sounds).

Parameters of DELAY1
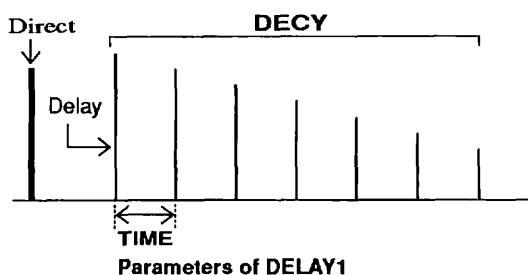
■ Effect Module 5: Reverb (REV)

This Effect Module includes three Effect Types which give a reverb effect to the sound.

●REV1 (Reverb 1)

This Effect Type is a Hall-type reverb effect, suited to adding rich ambience to the sound.

[Parameter]
(1)TIME: 0 to 10
This parameter determines the time it takes for the reverberation to decay. Increasing this value creates a larger apparent room size.
(2) MIX (Mix level): 0 to 10
This parameter determines the mix amount of the effect sound.
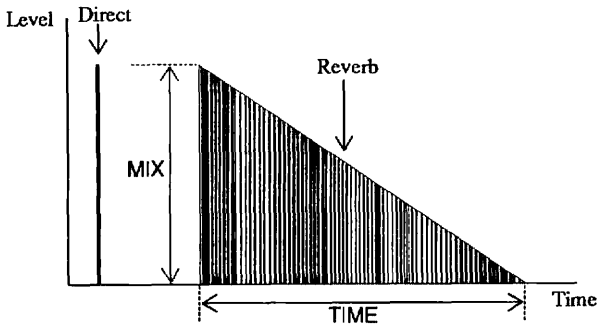
Parameters of Reverb

● REV2 (Reverb 2)

This Effect Type creates thicker density of the reverberation.

[Parameter]
(1)SHP (Shape): 0, 1, 2
This parameter determines the reverb effect from the three types of shape. Setting this value to 0 selects the shape for the room type reverb, to 1 reverses the shape , and to 2 selects that for the reverse type reverb.
(2) TIME: 0 to 50
This parameter determines the time it takes for the reverberation to decay, more precisely than for Reverb 1.
(3) MIX (Mix level): 0 to 10
This parameter determines the mix amount of the effect sound with the direct sound.

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Types of Shape
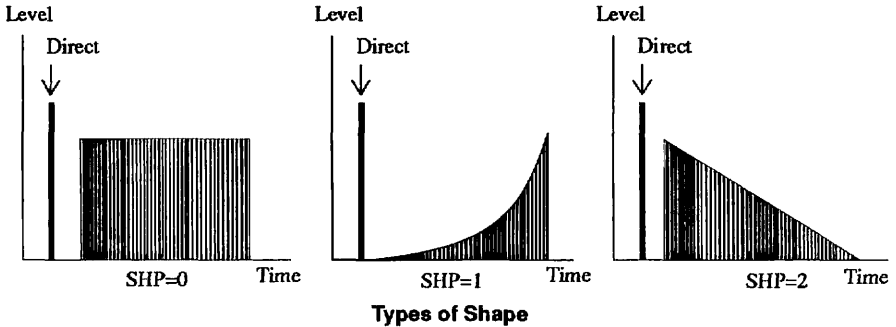
● DLY2 (Delay 2)

This Effect Type is a ping-pong delay effect in which the delayed repeats alternate between the left and right channels.

(1)DECY (Decay): 0 to 10
This parameter determines the number of repetitions of the delay sound.
(2) TIME: 1 to 44
This parameter determines the delay time (intervals between the delay sounds). To obtain the actual delay time (in ms unit), multiply the parameter value by 10.
(3) MIX (Mix level): 0 to 10
This parameter determines the mix amount of the effect sound with the direct sound. Setting this value to 0 outputs only the direct sound while setting this value to 10 gives a maximum of the effect sounds (delay sounds).

● LEVEL (Level)

This function determines the volume of each Patch. Although, this is not an effect, it is stored in memory as a part of Patches.

[Parameter]
(1)LVL (Output level): 0 to 200
This parameter determines the output level of each Patch.

Helpful Hint:

Setting of the LEVEL parameter differs from that of the master volume control to be carried out in the Play mode.

Using the optional remote foot controller FC01, the Patch selection and on/off of the Bypass function can be controlled by foot.

Making Connections to the Foot Controller

• Using the cable supplied with the FC01, connect the FC01 to the REMOTE connector (on the bottom of the panel) of the 9000.
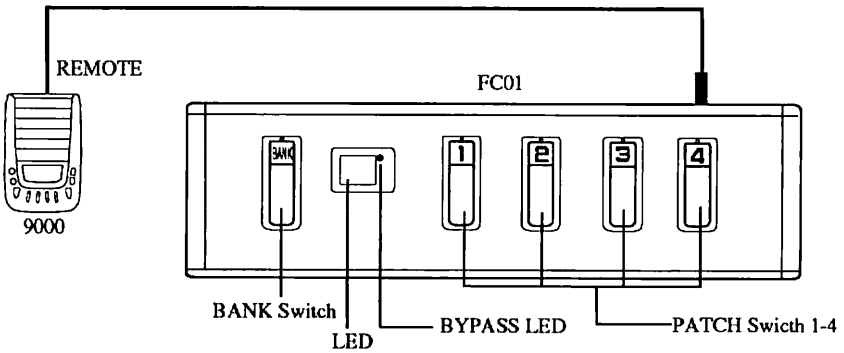
Connection Between the FC01 and the 9000

The FC01 does not require an independent power supply because power is supplied from the 9000 to the FC01. Be sure to turn off the power of the 9000 before connecting the FC01.

Selecting the Patch

· Step on the BANK switch.

The LED of the FC01 lights in the following order, from 0 → 1 → 2 → 3 → 4 → P → 0 .

0 to 4 are for the Bank numbers while "P" is for the Bypass Standby status. If the 9000 is already in the Bypass status, "P" is skipped and "0" is lit instead.
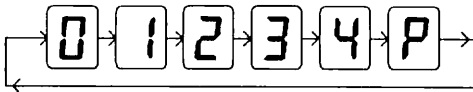
Selecting the Desired Bank

· Using the PATCH 1 to 4 key, select the desired Patch number.

Note:

The same as the operations on the panel of the 9000, the Patch is not changed when the Bank is changed. The selected Patch is activated when you press the PATCH key.

Bypassing the Effects

· Step on the BANK switch several times until the LED of the FC01 displays "P."
The LED starts flashing.

· Press one of the PATCH 1 to 4 key.
The LED stops flashing, and the 9000 shows the bank before entering the Bypass status. The BYPASS LED light up.

FCO1   9000
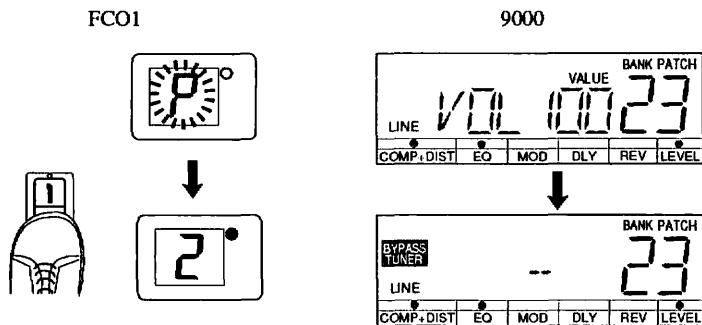
Bypass Operation

To release the 9000 from the Bypass status, using the BANK and PATCH keys of the FC01, select either of the following Patches.

Note:

The 9000 can be remotely controlled from the FC01 only when it is put in the Play mode. When the 9000 is put in another mode, the LED of the FC01 flashes, and selection of the Patches and on/off of the Bypass function are disabled.

9000 SPECIFICATIONS

Effect Programs: 21 programs

Patch Memory :   20(programmable)

Input : Guitar Input   1/4"phone jack×1
                          (input impedance 470kΩ)

       MIX IN   mini stereo jack×1

Output: Main Output   1/4"phone jack×2
                          (max 4Vp-p,10kΩ)

       Phones   mini stereo jack×1
                          (max 50mW, 32Ω)

Display :   Custom LCD×1
                          POWER Indicator LED×1

Control In/Out :   Remote In

Power Supply :   DC7.5V 200mA
                          AC adapter AD0001(option)

Dimensions :   106.4(W)×162 (L)×47 (H)mm

Weight :   250g(without batteries)
                          battery 19×6 : 114g

BLOCK DIAGRAM

INPUT — COMP+DIST — EQ — MOD — DLY — REV — LEVEL — OUTPUT
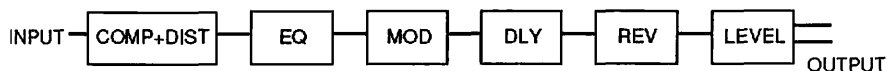
*Specifications are subject to change without notice.

Patch List

NAME : FULL CLEAN CHORUS

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
●CLEAN	TYPE	TYPE		TYPE	52
· RHYTHM	ENHANC	CHORS2		REV1	
‟CRUNCH	par1(DEPT)	par1(DEPT)	DECAY	par1(TIME)	
· OVERDRV	7	1		7	
· DISTORTION	par2(FREQ)	par2(RATE)	TIME	par2(MIX)	
COMP/2	10	30		2	
COMMENTS:		par3(MIX)	MIX	par3( )	
		6			

NAME : FAT DELAY CHORUS

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
●CLEAN	TYPE	TYPE		TYPE	52
· RHYTHM	EQ	PITCH		REV1	
· CRUNCH	par1(LO)	par1(PIT)	DECAY	par1(TIME)	
‟OVERDRV	0	0	5	6	
· DISTORTION	par2(HI)	par2(FIN)	TIME	par2(MIX)	
COMP/2	+7	+4	46	2	
COMMENTS:		par3(BAL)	MIX	par3( )	
		5	5		

NAME : STEREO RHYTHM

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
● CLEAN	TYPE	TYPE		TYPE	40
· RHYTHM	EQ	CHORS2			
· CRUNCH	par1(LO)	par1(DEPT)	DECAY	par1( )	
· OVERDRV	-2	10			
· DISTORTION	par2(HI)	par2(RATE)	TIME	par2( )	
COMP/2	+7	0			
COMMENTS:		par3(MIX)	MIX	par3( )	
		10			

NAME : HEAVY CHORUS DISTORTION

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
· CLEAN	TYPE	TYPE		TYPE	34
· RHYTHM	ENHANC	CHORS2			
· CRUNCH	par1(DEPT)	par1(DEPT)	DECAY	par1( )	
· OVERDRV	7	2			
● DISTORTION	par2(FREQ)	par2(RATE)	TIME	par2( )	
COMP/1	10	17			
COMMENTS:		par3(MIX)	MIX	par3( )	
		6			

NAME : HEAVY DISTORTION DELAY

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
· CLEAN	TYPE	TYPE		TYPE	24
· RHYTHM	ENHANC			DLY2	
· CRUNCH	par1(DEPT)	par1( )	DECAY	par1(DECY)	
· OVERDRV	6		0	0	
● DISTORTION	par2(FREQ)	par2( )	TIME	par2(TIME)	
COMP/1	10		48	44	
COMMENTS:		par3( )	MIX	par3(MIX)	
			8	5	

NAME : SLOW CLEAN PHASE

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
· CLEAN	TYPE	TYPE		TYPE	46
● RHYTHM	EQ	PHASE		REV1	
· CRUNCH	par1(LO)	par1(DEPT)	DECAY	par1(TIME)	
· OVERDRV	+ 3	6	0	0	
· DISTORTION	par2(HI)	par2(RATE)	TIME	par2(MIX)	
COMP/1	+ 5	1		2	
COMMENTS:		par3( )	MIX	par3( )	

NAME : CLEAN BLUES LEAD

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
● CLEAN	TYPE	TYPE		TYPE	40
· RHYTHM	EQ			REV1	
· CRUNCH	par1(LO)	par1( )	DECAY	par1(TIME)	
· OVERDRV	- 3		0	0	
· DISTORTION	par2(HI)	par2( )	TIME	par2(MIX)	
COMP/1	+ 7		8	2	
COMMENTS:		par3( )	MIX	par3( )	
			8		

NAME : RHTHYM CRUNCH

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
· CLEAN	TYPE	TYPE		TYPE	28
· RHYTHM	ENHANC			REV1	
● CRUNCH	par1(DEPT)	par1( )	DECAY	par1(TIME)	
· OVERDRV	5		0	0	
· DISTORTION	par2(FREQ)	par2( )	TIME	par2(MIX)	
COMP/1	10		9	3	
COMMENTS:		par3( )	MIX	par3( )	
			8		

NAME : METAL ROBOT

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
· CLEAN	TYPE	TYPE		TYPE	24
· RHYTHM	ENHANC	METAL		DLY2	
● CRUNCH	par1(DEPT)	par1(DEPT)	DECAY	par1(DECY)	
· OVERDRV	8	0		10	
· DISTORTION	par2(FREQ)	par2(FREQ)	TIME	par2(TIME)	
COMP/ 0	10	0		1	
COMMENTS:			MIX	par3(MIX)	
				10	

NAME : COMPRESSED FUNK

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
● CLEAN	TYPE	TYPE		TYPE	52
· RHYTHM	EQ	CHORS2		REV1	
· CRUNCH	par1(LO)	par1(DEPT)	DECAY	par1(TIME)	
· OVERDRV	0	3	0	1	
· DISTORTION	par2(HI)	par2(RATE)	TIME	par2(MIX)	
COMP/ 2	+ 4	7	28	1	
COMMENTS:		par3(MIX)	MIX	par3( )	
		6	1		

NAME : FUNK LEAD

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
● CLEAN	TYPE	TYPE		TYPE	52
· RHYTHM	EQ	CHORS2		REV2	
· CRUNCH	par1(LO)	par1(DEPT)	DECAY	par1(SHP)	
· OVERDRV	- 3	6	0	0	
· DISTORTION	par2(HI)	par2(RATE)	TIME	par2(TIME)	
COMP/ 2	+ 7	2	24	20	
COMMENTS:		par3(MIX)	MIX	par3(MIX)	
		0	1	10	

NAME : MILD CHORUS LEAD

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
· CLEAN	TYPE	TYPE		TYPE	26
· RHYTHM	ENHANC	CHORS1		REV1	
● CRUNCH	par1(DEPT)	par1(DEPT)	DECAY	par1(TIME)	
· OVERDRV	10	7		0	
· DISTORTION	par2(FREQ)	par2(RATE)	TIME	par2(MIX)	
COMP/ 0	8	7		3	
COMMENTS:		par3(MIX)	MIX	par3( )	
		7			

NAME : ROCK CHORUS LEAD

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
• CLEAN	TYPE	TYPE		TYPE	34
• RHYTHM	ENHANC	CHORS1		REV1	
● CRUNCH	par1(DEPT)	par1(DEPT)	DECAY	par1(TIME)	
• OVERDRV		8		5	
• DISTORTION	par2(FREQ)	par2(RATE)	TIME	par2(MIX)	
COMP/2	7	7		3	
COMMENTS:		par3(MIX)	MIX	par3( )	
		6			

NAME :COMB LEAD

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
• CLEAN	TYPE	TYPE		TYPE	30
• RHYTHM	ENHANC	FLANGE		REV2	
● CRUNCH	par1(DEPT)	par1(DEPT)	DECAY	par1(SHP)	
• OVERDRV	10	0		0	
• DISTORTION	par2(FREQ)	par2(RATE)	TIME	par2(TIME)	
COMP/0	10	10		8	
COMMENTS:		par3(PEAK)	MIX	par3(MIX)	
		5		3	

NAME : CHORUS BLUES LEAD

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
● CLEAN	TYPE	TYPE		TYPE	48
• RHYTHM	EQ	CHORS1		REV1	
• CRUNCH	par1(LO)	par1(DEPT)	DECAY	par1(TIME)	
• OVERDRV	- 5	0	3	3	
• DISTORTION	par2(HI)	par2(RATE)	TIME	par2(MIX)	
COMP/1	+ 7	0	35	3	
COMMENTS:		par3(MIX)	MIX	par3( )	
		6	4		

NAME : HARMONY LEAD - 5

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
• CLEAN	TYPE	TYPE		TYPE	22
• RHYTHM	ENHANC	PITCH		REV1	
● CRUNCH	par1(DEPT)	par1(PIT)	DECAY	par1(TIME)	
• OVERDRV	10	- 5	5	0	
• DISTORTION	par2(FREQ)	par2(FIN)	TIME	par2(MIX)	
COMP/2	7	0	22	5	
COMMENTS:		par3(BAL)	MIX	par3( )	
		5	3		

PRESET PATCHES

BP	PATCH NAME	BP	PATCH NAME	BP	PATCH NAME
0 1	SOFT CHORUS	2 1	MODERN JAZZ	4 1	RHYTHM FLANGE
2	BLUES CHORUS	2	ECHO LEAD	2	MULTI-DELAY LEAD
3	HEAVY ROCK	3	CHORUS ROCK	3	HONK LEAD
4	THICK ROCK LEAD	4	-5 PITCH LEAD	4	CLASSIC TREMOLO
1 1	FUNKY PHASE	3 1	SMOOTH CHORUS		
2	FULL CHORUS LEAD	2	ZOOM TALK		
3	SQUEEZE	3	ROCK CRUNCH		
4	CRY-WAH	4	BASS LEAD		

BLANK PATCH CHART

BANK_____PATCH_____NAME :

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
• CLEAN • RHYTHM	TYPE	TYPE		TYPE	
• CRUNCH • OVERDRV	par1( )	par1( )	DECAY	par1( )	
• DISTORTION	par2( )	par2( )	TIME	par2( )	
COMP/					
COMMENTS:		par3( )	MIX	par3( )	

BANK_____PATCH_____NAME :

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
• CLEAN • RHYTHM	TYPE	TYPE		TYPE	
• CRUNCH • OVERDRV	par1( )	par1( )	DECAY	par1( )	
• DISTORTION	par2( )	par2( )	TIME	par2( )	
COMP/					
COMMENTS:		par3( )	MIX	par3( )	

BANK_____PATCH_____NAME :

COMP+DIST	EQUALIZER	MODULATION	DELAY	REVERB	PATCH LVL
• CLEAN • RHYTHM	TYPE	TYPE		TYPE	
• CRUNCH • OVERDRV	par1( )	par1( )	DECAY	par1( )	
• DISTORTION	par2( )	par2( )	TIME	par2( )	
COMP/					
COMMENTS:		par3( )	MIX	par3( )	

ZOOM

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